IN THE CLAIMS:

The following is a listing of the claims currently pending in the above-identified application. This listing replaces all prior listings and versions of the claims. Any deletion of subject matter from the claims and any cancellation of claims are effected without prejudice.

1.–66. (Cancelled)

67. (Previously Presented) A solid substance comprised by more than one half by weight of hollow carbon nanotubes having walls consisting essentially of two layers of carbon atoms, said nanotubes consisting of two concentric nearly cylindrical graphene layers.

68.-69. (Cancelled)

70. (Withdrawn) An electron-emissive material comprising a surface consisting primarily of a plurality of emissive tubules, wherein the electron-emissive material is composed of a mixture of double wall (a) nanotubes and (b)nanotubes other than double wall nanotubes which is less than 5 walled.

71.-72. (Cancelled)

73. (Withdrawn) The electron-emissive material of claim 70, wherein an overall composition of the electron-emissive material comprises at least 20% of nanotubes, other than double walled nanotubes, said nanotubes being less than 5 walled.

74. (Withdrawn) The electron-emissive material of claim 70, wherein an overall composition of the electron-emissive material comprises up to 90% of mixed walled nanotubes.

75. (Currently Amended) An electron emissive material comprising a surface consisting primarily of a plurality of emissive tubules, wherein each of the plurality of emissive tubules ~~have a controlled number of graphene layers consisting essentially of two cylindrical layers of carbon atoms,~~ are nanotubes having two concentric nearly cylindrical graphene layers wherein each of the cylindrical layers of the nanotubes have a lattice spacing of 0.35 – 0.45 nm.

76. (Currently Amended) An electron emissive material comprising a surface consisting primarily of a plurality of emissive tubules, wherein each of the plurality of emissive tubules is generally double walled nanotubes consisting of two concentric nearly cylindrical graphene layers, wherein end cap of the double wall nanotubes with double layer curvature generates greater electric field strength than a single curvature, graphitic sheet, edge or ridge emitter.

77. (Original) The electron-emissive materials of claim 76, wherein the curvature of the double wall nanotubes and sharpened end elements curvature is within the range of 1.7 -5.5 nm.

78. (Currently Amended) An electron emissive material comprising a surface consisting primarily of a plurality of emissive tubules, wherein each of the plurality of emissive tubules is generally double walled nanotubes having two concentric nearly cylindrical graphene layers, wherein the double wall nanotubes have a diameter greater than 1.2 nm.

79. (Original) The electron-emissive material of claim 78, wherein the majority of the double wall nanotubes have a diameter in the range of 2.7 nm to 5.5 nm.

80. (Previously Presented) The electron-emissive materials of claim 78, wherein the double wall nanotubes have a length greater than 1000 nm.

81. (Previously Presented) The electron-emissive material of claim 78, wherein a plurality of the double wall nanotubes are oriented to cause electric field enhancement.

82. (Currently Amended) An electron emissive material comprising a surface consisting primarily of a plurality of emissive tubules, wherein each of the plurality of emissive tubules is generally double walled nanotubes having two concentric nearly cylindrical graphene layers wherein the double wall nanotubes emit an electron at an average electric field of less than 10 V/μm.

83. (Original) The electron-emissive materials of claim 82, wherein the double wall nanotubes are characterized by the emission of electrons at an average electric field of less than 5V/μm.

84. (Original) The electron emissive materials of claim 82, wherein the double wall nanotubes are characterized by the cold emission of electrons at an average electric field of less than 2V/μm.

85.-96. (Cancelled)

97. (Currently Amended) An electron emissive material comprising a surface consisting primarily of a plurality of emissive tubules, wherein each of the plurality of emissive

tubules is generally nanotubes with a controlled number of cylindrical graphene layers consisting essentially of two layers of carbon atoms.

98. (Previously Presented) The electron emissive material of claim 97, wherein number of the graphene layers is two.

99. (Previously Presented) The electron emissive material of claim 98, wherein an overall composition of the electron emissive material comprises at least 20% double walled nanotubes.

100. (Previously Presented) The electron emissive material of claim 98, wherein an overall composition of the electron emissive material comprises at least 70% of double walled nanotubes.

101. (Previously Presented) The electron emissive material of claim 98, wherein the double wall nanotubes have a length greater than 1000 nm.

102. (Previously Presented) The electron emissive material of claim 98, wherein a plurality of the double walled nanotubes are oriented to cause electric field enhancement.

103. (Withdrawn) A field emission device comprising:

a cathode having an electron-emissive material, the electron-emissive material having a surface consisting of a plurality of nanotubes with a controlled number of graphene layers uniformly distributed over the cathode surface, wherein each of the plurality of emissive element is generally a double walled nanotube and an anode disposed to receive electrons emitted from the electron-emissive cathode.

104. (Withdrawn) A field emission device as defined in claim 103, comprising a vacuum chamber for enclosing said cathode and anode.

105. (Withdrawn) A field emission device as defined in claim 104, comprising a control grid interposed between the cathode and anode in controlling the electron flow from the cathode to the anode in response to an electric bias voltage applied to the control grid relative to the cathode.

106. (Withdrawn) A field emission device as defined in claim 105, wherein a fluorescent light emitting element is positioned to receive electrons emitted from the cathode.

107. (Withdrawn) A field emission device as defined in claim 106, comprising a CRT, wherein the anode, cathode and control grid are adapted and arranged to have electric voltage applied thereto for causing the cathode to emit electrons in response to an applied control grid voltage for controlling the light emitted by the fluorescent elements as a function of the applied grid voltage.

108. (Previously Presented) Substantially pure double-wall nanotubes, whereas the double- wall nanotubes have two concentric nearly cylindrical graphene layers.

109. (Previously Presented) The double-wall nanotubes according to Claim 108, which additionally contain single-wall nanotubes, wherein the ratio of double-wall nanotubes to single-wall nanotubes is greater than 30.

110. (Previously Presented) The double-wall nanotube according to Claim 108, wherein the outer diameter of the double- wall nanotube ranges from 3.4 mm to 5.5 mm, and the inner diameter ranges from 2.7 to 4.7 mm.

111. (Previously Presented) The solid substance according to Claim 67 where the nanotubes having walls consisting essentially of two layers of carbon atoms are present in at least 70% by weight.

112. (Previously Presented) The solid substance according to Claim 67 where the solid substance additionally contains single wall nanotubes, and the number ratio of nanotubes having walls consisting essentially of two layers of carbon atoms relative to single wall nanotubes is about 3:1.

113. (Previously Presented) The solid substance according to Claim 112 where the number ratio of nanotubes having walls consisting essentially of two layers of carbon atoms relative to single wall nanotubes is greater than 30.

114. (Previously Presented) The solid substance according to Claim 67 wherein the nanotubes have an outer layer and an inner layer wherein the diameter of the outer layer ranges between 3.4nm and 5.5nm and the diameter of the inner layer ranges between 2.7nm to 4.7 nm.